



DEC 02 2013

Mr. Timothy Alburger
Seneca Resources
2131 Mars Court
Bakersfield, CA 93308

Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # S-3755
Project # S-1132956

Dear Mr. Alburger :

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project modifies a thermally enhanced oil recovery (TEOR) operation with 200 cyclic wells served by a casing vent vapor control system.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
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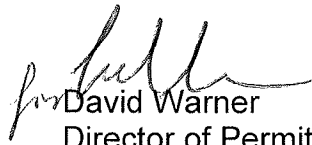
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Bakersfield, CA 93308-9725
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Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "David Warner", is written over the printed name.

David Warner
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Facility Name:	Seneca Resources	Date:	October 7, 2013
Mailing Address:	2131 Mars Court Bakersfield, CA 93308	Engineer:	Robert Rinaldi
Contact Person:	Timothy Alburger	Lead Engineer:	Richard Karrs
Telephone:	661-399-4270 ext. 3544		
Fax:	661-399-7706		
E-Mail:	alburgert@srcx.com		
Application #(s):	S-3755-12-15		
Project #:	S-1132956		
Deemed Complete:	August 5, 2013		

I. Proposal

Seneca Resources (hereafter referred to as SR) operates oil and gas production facilities. SR has requested an Authority to Construct (ATC) to modify a PTO that authorizes a thermally enhanced oil recovery (TEOR) operation with 200 cyclic oil wells.

SR is requesting the following changes:

Move references to location of equipment from the permit conditions to the equipment description, lower the VOC limit of the gas/vapor processed to less than 10%, which reflects the existing VOC concentration, and update conditions referencing Rule 4401 to be consistent with the most recently amended version of the rule.

The modifications to reference the authorized locations of operation within the equipment description and to update Rule 4401 requirements are administrative in nature and are not subject to NSR requirements.

SR received their Title V Permit on March 31, 2012. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. SR must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4401 Steam-Enhanced Crude Oil Production Wells (6/16/11)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The project is located in Section 7, 13, 18, 19 and 20, Township 11N, Range 23W in Western Kern County. The equipment is not located within 1,000 feet of a K-12 school.

IV. Process Description

Steam generators are used to produce steam. The steam is injected under pressure into an oil production zone. The steam heats the crude oil, reducing its viscosity, making it easier to pump.

The well casing gas is collected from the wells, manifolded together, scrubbed to remove the sulfur, then burned in a flare or steam generator.

Emissions from the casing vapor collection system are fugitive emissions and come from the components in the collection system. Each pipe flange, threaded connection, etc., is expected to emit a certain finite amount of gas, and emissions can be calculated based on the number of components and the VOC content of the gas. District policy SSP-2015 states that VOC emissions are not assessed (for Rule 2201 purposes) to piping and components handling fluid streams with a VOC content of 10% or less by weight. In this case, the gas analysis states the VOC content is 5.23% and therefore emissions are not assessed (for Rule 2201 purposes).

V. Equipment Listing

Pre-Project Equipment Description:

S-3755-12-14: THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 200 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H₂S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S)

Proposed Modification:

S-3755-12-15: MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 200 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H₂S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S): MOVE REFERENCES TO LOCATION OF EQUIPMENT FROM THE PERMIT CONDITIONS TO THE EQUIPMENT DESCRIPTION, LOWER THE VOC LIMIT OF HYDROCARBONS IN GAS PROCESSED TO LESS THAN 10% AND REVISE RULE 4401 PERMIT CONDITIONS TO REFLECT THE LATEST VERSION OF THE RULE

Post-Project Equipment Description:

S-3755-12-15: THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 200 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H₂S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S) LOCATED IN THE EAST HALF OF SECTION 13, T11N, R24W AND SECTIONS 7, 18, 19, AND 20 T11N, R23W

VI. Emission Control Technology Evaluation

Hydrogen Sulfide (H₂S) and VOC are the pollutants of concern with well casing gas. The gas is first collected and separated from any liquid. The gas is then piped to a condenser and the liquid is removed again. The remaining gas runs through H₂S scrubbers where the sulfur is removed. The gas is then compressed, run through another condenser where even more liquid is removed and finally the gas is incinerated in a steam generator or flare, where 99% of the VOCs are destroyed.

Fugitive emissions result from the components in the system. Components handling gas with VOC contents of <10% are exempt from emissions calculations. Since the emissions are based on the number of components in the system, and not just the number of wells, the facility can increase the number of wells so long as the emissions do not exceed the daily limit.

District policy SSP-2015 states that VOC emissions are not assessed (for Rule 2201 purposes) to piping and components handling fluid streams with a VOC content of 10% or less by weight. In this case the gas analysis states the VOC content is 5.23% (Appendix B) and therefore emissions are not assessed from the proposed new wells (for Rule 2201 purposes).

VII. General Calculations

A. Assumptions

- Only fugitive emissions are effected.
- The weight percentage of VOCs as a percentage of the entire gas stream is less than 10%. Pursuant to District Policy SSP-2015, VOC emissions are not assessed to piping and components handling fluid streams with a VOC content of 10% or less by weight (i.e. VOCs as a percentage of the entire gas stream).

B. Emission Factors

Not required.

C. Calculations

1. Pre-Project Potential to Emit, (PE₁)

18.3 lb/day (as referenced from the current PTO)

2. Post Project Potential to Emit, (PE₂)

0.0 lb/day (District Policy SSP-2015)

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE1 calculations are not necessary.

4. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE2 calculations are not necessary.

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

This facility is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

6. Rule 2410 Major Source Determination

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the fugitive emissions are not included in the Rule 2410 Major Source Determination. All post project emissions associated with this project are fugitive emissions; therefore, a Rule 2410 Major source determination is not required.

7. Baseline Emissions (BE)

a. Annual BE

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

As the post project PE for the TEOR system is 0.0 lb/yr, emissions offsets and calculation of BE emissions is not required for this project.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the SB 288 Major Modification calculation.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Rule 2410 Prevention of Significant Deterioration (PSD) Applicability determination. All post project emissions associated with this project are fugitive emissions; therefore, a Rule 2410 Prevention of Significant Deterioration (PSD) Applicability determination is not required.

10. Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

$QNEC = PE2 - BE$, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly BE can be calculated as follows:

	Quarterly NEC [QNEC]		
	PE2 lb-VOC/yr	PE1 lb-VOC/yr	QNEC (lb-VOC/qtr)
S-3755-12-15	0	6680	-1670

VIII. Compliance

Rule 2201 - New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

There are no new emissions units with PE > 2 lb/day associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

There are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

There are no modified emissions units associated with this project with emissions increase exceeding 2.0 lb/day. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed above, this project does not constitute an SB 288 and/or Federal Major Modification. Therefore BACT is not triggered for any pollutant.

B. Offsets

1. Offset Applicability and Quantity of Offsets Required

Offset are not required for this project, as the only emissions unit being modified has a post project potential to emit of 0.0 lb/day.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated above, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	NA	NA	20,000 lb/year	No
SO _x	NA	NA	54,750 lb/year	No
PM ₁₀	NA	NA	29,200 lb/year	No
CO	NA	NA	200,000 lb/year	No
VOC	>20,000	>20,000	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds			
Pollutant	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	0	20,000 lb/year	No
SO _x	0	20,000 lb/year	No
PM ₁₀	0	20,000 lb/year	No
CO	0	20,000 lb/year	No
VOC	-6680	20,000 lb/year	No

2. Public Notice Action

As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

D. Daily Emissions Limits (DEL)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

DELs for the emission units in this project will be included on the ATCs in the form of fugitive component emissions limits in lb VOC/day. To demonstrate compliance with the DEL, the permittee will be required to demonstrate on an annual basis that the VOC content of the vapors does not exceed 10% by weight.

E. Compliance Assurance

The following measures shall be taken to ensure continued compliance with District Rules:

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

Fugitive emissions monitoring by the operator is not required for components that handle only vapor with less than 10% by weight VOC. The operator will annually monitor the VOC content of the vapor ahead of the sulfur scrubbers to verify compliance.

3. Record Keeping

Recordkeeping, if applicable, shall be in accordance with the requirements set forth in Rule 4401.

4. Reporting

Reporting, if applicable, shall be in accordance with the requirements set forth in Rule 4401.

Rule 2410 Prevention of Significant Deterioration

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, fugitive emissions are not counted in determining PSD major source and major modification applicability. All post project emissions associated with this project are from fugitive sources; therefore, Rule 2410 does not apply.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:

- a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
 6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. SR must apply to administratively amend their Title V permit.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

There are no subparts of 40 CFR 60 that apply to TEOR systems. Therefore, the TEOR unit in this project is not subject to Rule 4001.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the steam generators are fired solely on natural gas and the TEOR system will result in fugitive emissions only, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following condition will remain listed on the facility-wide permit to ensure compliance:

- No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (11/15/01). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101]

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected. This facility-wide permit for BPC contains the following condition:

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

As indicated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

District Rule 4401 – Steam-Enhanced Crude Oil Production Wells

The purpose of this rule is to limit the VOC emissions from steam-enhanced crude oil production well vents. This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems.

The operator is currently in compliance with all applicable requirements of this rule, as confirmed by the most recent District inspection of the TEOR system. Continued compliance is expected.

With the VOC content of vapor/liquid for the entire TEOR system limited by permit condition to less than 10% by weight, the operator is exempt from the requirements of Section 5.4.1 through Section 5.4.6 that set forth the operator's requirements for inspection of components.

Rule 4401 requirements are included as enforceable permit conditions on the current permit. These conditions have been updated to include the latest revisions to Rule 4401, as amended 6/16/11.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

The following condition will ensure compliance with Rule 4801:

5. Sulfatreat vessels shall operated and maintained to achieve 95% by weight removal of sulfur compounds from TEOR gas. [District Rule 2201] Y

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality ACT (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

As compliance with all applicable rules and regulations is expected, it is recommended that Authority to Construct S-3755-12-15 be issued subject to the permit conditions on the draft Authority to Construct included as Appendix C.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-3755-12-15	3020-09-A	200 wells	\$1,868.00

Appendices

- A: PTO S-3755-12-14
- B: Gas Analysis
- C: TV – Compliance Certification Form
- D: Draft Authority to Construct

APPENDIX A

PTO S-3755-12-14

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3755-12-14

EXPIRATION DATE: 02/29/2016

SECTION: 18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 200 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H₂S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All emissions units shall always operate at least 2,900 feet away from the nearest receptor. [District Rule 4102]
3. Steam enhanced wells shall only be located in the east half of Section 13, T11N, R24W and Sections 7, 18, 19, and 20 T11N, R23W. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Steam generators S-2891-1 and S-2891-2 shall not be located in Section 7, T11N, R23W and SE Section 13, T11N, R24W. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Un-condensable vapors from steam enhanced wells located in east half of Section 13, T11N, R24W and Sections 7, 18, 19, and 20 T11N, R23W shall be incinerated at steam generators (S-2891-1, S-2891-2, S-3755-11 and S-3755-19) and/or flare (S-3755-10). [District Rule 2201] Federally Enforceable Through Title V Permit
6. Sulfatreat vessels shall operated and maintained to achieve 95% by weight removal of sulfur compounds from TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Fugitive VOC emissions from this Casing Vapor Control System (CVCS) shall not exceed 18.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
9. VOC content of hydrocarbons in gas processed from steam enhanced wells approved by ATC S-3755-12-13 shall not exceed 10% by weight. Permittee shall sample and record the VOC content of hydrocarbons at least once every 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
10. VOC content of hydrocarbons in gas processed from steam enhanced wells located in Section 7, T11N, R23W shall not exceed 10% by weight. Permittee shall sample and record the VOC content of hydrocarbons at least once every 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
11. VOC content of hydrocarbons in gas processed from steam enhanced wells located in the east half of Section 13, T11N, R24W shall not exceed 50% by weight. Permittee shall sample and record the VOC content of hydrocarbons at least once every 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. VOC content of hydrocarbons in gas processed from steam enhanced wells located in Section 18, T11N, R23W shall not exceed 16% by weight. Permittee shall sample and record the VOC content of hydrocarbons at least once every 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. VOC content of hydrocarbons in gas processed in the Section 18 CVCS site shall not exceed 16% by weight. Permittee shall sample and record the VOC content of hydrocarbons at least once every 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
14. VOC content of hydrocarbons in gas processed from steam enhanced wells located in Sections 19 and 20, T11N, R23W shall not exceed 10% by weight. Permittee shall sample and record the VOC content of hydrocarbons at least once every 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Any component leak shall be repaired to a leak-free condition, or vented to a flare satisfying the requirements of 40 CFR 60.18, or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 4401, 6.2] Federally Enforceable Through Title V Permit
17. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
18. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request [District Rule 1070 and 4401, 6.1] Federally Enforceable Through Title V Permit
19. An operator shall not operate a steam-enhanced crude oil production well unless either of the following two conditions are met: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids is connected to a VOC collection and control system as defined in Section 3.0 of this Rule or 2) the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0. [District Rule 4401, 5.1] Federally Enforceable Through Title V Permit
20. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.6.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2] Federally Enforceable Through Title V Permit
21. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2] Federally Enforceable Through Title V Permit
22. No leaking components (as defined in Section 5.6.2 of Rule 4401) may be used unless they have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
23. Each hatch shall be closed at all times except during attended repair, replacement, or maintenance operations, providing such activities are done as expeditiously as possible with minimal spillage or material and VOC emissions into the atmosphere. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
24. The operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
25. Unless otherwise specified in Section 5.8, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit
27. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of this Rule. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit
28. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
29. The operator shall also perform the following inspections: 1) An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. 2) An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service, and 3) Except for PRDs subject to the requirements of Section 5.8.4.1 of this Rule, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit
30. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit
31. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit
32. Upon detection of a leak, an operator shall affix a readily visible weatherproof tag to that leaking component that includes the following information: 1) The date and time of leak detection; 2) The date and time of the leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major or minor liquid leak; and 5) Whether the component is an essential component, and unsafe-to-monitor component, or a critical component. [District Rule 4401, 5.5] Federally Enforceable Through Title V Permit
33. The tag shall remain affixed to the leaky component until all the following requirements are met: 1) The component is repaired or replaced, 2) The component is re-inspected as set forth in Section 6.3, and 3) The component is found to be in compliance with this Rule. [District Rule 4401, 5.5] Federally Enforceable Through Title V Permit
34. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5] Federally Enforceable Through Title V Permit
35. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0, an operator shall comply with at least one of the following three requirements as soon as practicable but not later than the time period specified in Table 4: 1) Repair or replace the leaking component, 2) Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or 3) Remove the leaking component from operation. [District Rule 4401, 5.5] Federally Enforceable Through Title V Permit
36. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 4. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

37. The time of the initial leak detection shall be the start of the repair period specified in Table 4. [District Rule 4401, 5.5] Federally Enforceable Through Title V Permit
38. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5] Federally Enforceable Through Title V Permit
39. The following records shall be retained for a period of five years and made available for District inspection upon request. 1) The dates and well identification where steam injection occurs, 2) Monthly records of county-specific crude oil production as set forth by the California Division of Oil, Gas and Geothermal Resources, For the purpose of this rule, the monthly crude oil production records required by the California Division of Oil, Gas, and Geothermal Resources may be used to satisfy this requirement, 3) All source test records which demonstrate compliance with the VOC collection and control efficiency as defined in Section 3.0, 4) All source test data conducted pursuant to Section 4.6.2 shall be submitted to the District with 60 days thereafter, 5) The operator shall maintain an Inspection Log pursuant to Section 6.4, 6) All records of each calibration of the portable hydrocarbon detection instrument shall be maintained, including a copy of the current calibration gas certification from the vendor, the date of calibration, the concentration of the calibration gas, the instrument reading of the calibration before and after adjustment, the calibration gas expiration date and the calibration gas cylinder pressure at the time of calibration, 7) Records of the facility training records shall be maintained of the training program operated pursuant to Section 6.5, 8) A copy of the APCO-approved Operator Management Plan shall be maintained. 9) A list of all gauge tanks shall be submitted to the District including the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment, 10) Records of results of all gauge tank TVP testing conducted pursuant to Section 6.2.5 shall be submitted to the District within 60 days thereafter, 11) Any operator that has discovered that a pressure regulating device has released shall record the date that the release was discovered along with the identity and location of the release. All such records shall be submitted to the District within 60 days after the end of the calendar year. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
40. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the concentration must be below 50 ppmv, in which case EPA Method 25a may be used. EPA Method 18 may be used instead, providing the requirements under Section 6.3.1 are met. [District Rule 4401, 6.3] Federally Enforceable Through Title V Permit
41. VOC content shall be analyzed using the latest revision of ASTM Method E-168, E169 or E260 as applicable. Analysis of halogenated exempt compounds shall be performed using ARB Method 432. [District Rule 4401, 6.3] Federally Enforceable Through Title V Permit
42. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3] Federally Enforceable Through Title V Permit
43. For the purpose of Section 4.6.2, the VOC mass emission rate shall be determined according to the procedures described in the document USEPA-909/9-81-003, "Assessment of VOC Emissions from Well Vents Associated with Thermally Enhanced Oil Recovery". [District Rule 4401, 6.3] Federally Enforceable Through Title V Permit
44. The VOC content by weight percent shall be determined using ASTM D1945 for gases and SCAQMD Method 304-91 or the latest revision of ASTM Method E169, E169 or E260 for liquids. [District Rule 4401, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

45. The operator shall maintain an inspection log in which the operator records at least all of the following information for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type, 2) The location, type and name or description of each leaking component and description of any unit where the leaking component is found, 3) The date of leak detection and the method of leak detection, 4) For gaseous leaks, the leak concentration in ppmv and, for liquids leaks, whether the leak is major or minor, 5) The date of repair, replacement or removal from operation of leaking components, 6) The identity and location of essential components and critical components as defined in this Rule, found leaking, that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than 1 year after detection, whichever comes earlier, 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or replaced, 9) The inspectors name, business mailing address, and business telephone number, and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
46. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
47. The operator shall submit an Operator Management Plan for approval by the District that shall include all of the following: 1) A description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt pursuant to Section 4.0 of this rule. 2) Identification and description of any known hazard that might affect the safety of an inspector, 3) Except for pipes, the number of components that are subject to this Rule by component type, 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components, 5) Except for pipes, the location of components subject to this Rule, 6) Except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the Operator Management Plan. 7) A detailed schedule of inspections of components to be conducted as required by this Rule and whether the operator inspections of components required by this Rule will be performed by a qualified contractor or in-house team, 8) A description of training standards for personnel that inspect and repair components, 9) A description of leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and experienced operators as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
48. By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
49. The APCO shall provide written notice to the operator of the approval or incompleteness of a new or revised Operator Management Plan within 60 days of receiving such Operator Management Plan. If the APCO fails to respond in writing within 60 days after the date of receiving the Operator Management Plan, it shall be deemed approved. No provision of the Operator Management Plan, approved or not, shall conflict with or take precedence over any provision of this rule. [District Rule 4401, 6.8] Federally Enforceable Through Title V Permit
50. The operator of any new steam-enhanced crude oil production well, or any nonsteam-enhanced crude oil production well converted to a steam-enhanced crude oil production well, which commences steam-enhancement operations on or after April 11, 1991, shall comply with the requirements of this rule and the applicable permit requirements of Rule 2201 (New and Modified Stationary Source Review Rule) before steam injection and no later than the first detectable flow at the casing vent. [District Rule 4401, 7.1] Federally Enforceable Through Title V Permit
51. Steam-enhanced crude oil production wells and components that are exempt pursuant to Section 4.3, 4.4, 4.5, 4.8 or 4.9 that become subject to this rule through loss of exemption status shall not be operated until such time that they are in full compliance with the requirements of this rule. [District Rule 4401, 7.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

APPENDIX B

Gas Analysis



Seneca Western Minerals Corp.
Midway Sunset, Maricopa

Project 359-7744D
Laboratory ID 12136-13

Sample Description: H₂S Scrubber Inlet Gas
 Sample Location: H₂S Scrubber Inlet
 Sampled by: Jeremy Kincaid

Date Sampled: April 16, 2012
 Date Received: April 16, 2012
 Date Analyzed: April 16, 2012

Fuel Gas Analysis Results

CONSTITUENT	MOLE %	WT. %	CHONS Wt. %	
Oxygen	0.116	0.142	Carbon	49.40
Nitrogen	0.554	0.593	Hydrogen	11.12
Carbon Dioxide	31.335	52.694	Oxygen	38.45
Carbon Monoxide	0.000	0.000	Nitrogen	0.59
Hydrogen Sulfide	0.356	0.464	Sulfur	0.44
Methane	64.790	39.717	H/C	0.225
Ethane	1.033	1.186	H ₂ S ppmv	H ₂ S gr/100 SCF*
Propane	0.314	0.530	3563	211
Isobutane	0.065	0.144	TRs ppmv	TRs gr/100 SCF*
N-Butane	0.138	0.308	3645	216
Isopentane	0.041	0.113		
N-Pentane	0.059	0.163		
Hexanes	1.199	3.947		
Total(s)	100.000	100.000	* Reported as Sulfur	

Specific Gravity (Air = 1)	0.9036
Specific Volume (cf/lb)	14.50
Gross Calorific Value, Dry (Btu/cf)	753.04
Gross Calorific Value, Wet (Btu/cf)	737.37
Gross Calorific Value, Dry (Btu/lb)	10918.56
Net Calorific Value, Dry (Btu/cf)	680.21
Net Calorific Value, Wet (Btu/cf)	666.06
Compressibility Factor "Z" @ 60° F, 1 atm	0.9966
H ₂ S lbMMBtu SO _x as SO ₂	0.784
TRs lbMMBtu SO _x as SO ₂	0.802
EPA F-Factor @ 68° F (DSCF/MMBtu)	9038
EPA F-Factor @ 60° F (DSCF/MMBtu)	8903

References:

ASTM Methods D1945, D3588 & D6228
 GC-TCD & GC-FPD
 TRS = Total Reduced Sulfur

Reviewed By: Tim Brennan, Laboratory Manager

"Professional Air Emissions Testing and Analytical Services"

18828 Highway 65 • Bakersfield, CA 93308
 (661) 391-0112 • (661) 391-0153 Fax

SENECA RESOURCES
PTO S-1114
Gas Analysis

Sample Date: 04.16.12

Facility: Midway-Sunset Maricopa Field -- H2S Scrubber Inlet Tower

Stream: Casing Vapor Recovery Gas

Compound	Formula	Mole Weight	Mole Percent	Total Weight	Percent Weight
01. Oxygen	O2	31.999	0.116	3.712	0.142%
02. Nitrogen	N2	28.013	0.554	15.519	0.596%
03. Carbon Dioxide	CO2	44.010	31.335	1,379.053	52.940%
04. Methane	CH4	16.043	64.790	1,039.426	39.902%
05. Ethane	C2H6	30.070	1.033	31.062	1.192%
06. Propane	C3H8	44.097	0.314	13.846	0.532%
07. Isobutane	C4H10	58.124	0.065	3.778	0.145%
08. n-Butane	C4H10	58.124	0.138	8.021	0.308%
09. Isopentane	C5H12	72.151	0.041	2.958	0.114%
10. n-Pentane	C5H12	72.151	0.059	4.257	0.163%
11. Hexane...	C6+	86.178	1.199	103.327	3.967%
Totals			99.644	2,604.961	100.000%

VOC **5.23%**

APPENDIX C

TV Compliance Certification Form

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)


☐ SIGNIFICANT PERMIT MODIFICATION ☐ ADMINISTRATIVE
☒ MINOR PERMIT MODIFICATION ☐ AMENDMENT

COMPANY NAME: Seneca Resources	FACILITY ID: S- 1114
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name:	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- ☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- ☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- ☒ Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- ☒ Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:



Signature of Responsible Official

July 15, 2013

Date

Brad Elliott

Name of Responsible Official (please print)

Vice President – West Division

Title of Responsible Official (please print)

APPENDIX D

Draft Authority to Construct

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-3755-12-15

LEGAL OWNER OR OPERATOR: SENECA RESOURCES
MAILING ADDRESS: 2131 MARS COURT
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL WESTERN

SECTION: 18 TOWNSHIP: 11N RANGE: 23W

EQUIPMENT DESCRIPTION:

MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 200 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H₂S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S): MOVE REFERENCES OF AUTHORIZED LOCATIONS OF TEOR OPERATION FROM THE PERMIT CONDITIONS TO THE EQUIPMENT DESCRIPTION, LOWER THE VOC LIMIT OF THE GAS PROCESSED TO 10% OR LESS AND REVISE RULE 4401 PERMIT CONDITIONS TO REFLECT THE CURRENT RULE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All emissions units shall always operate at least 2,900 feet away away from the nearest receptor. [District Rule 4102]
5. Steam generators S-2891-1 and S-2891-2 shall not be located in Section 7, T11N, R23W and SE Section 13, T11N, R24W. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

S-3755-12-15 : Nov 27 2013 10:58AM -- RINALDIR : Joint Inspection Required with RINALDIR

6. Un-condensable vapors from steam enhanced wells located in east half of Section 13, T11N, R24W and Sections 7, 18, 19, and 20 T11N, R23W shall be incinerated at steam generators (S-2891-1, S-2891-2, S-3755-11 and S-3755-19) and/or flare (S-3755-10). [District Rule 2201] Federally Enforceable Through Title V Permit
7. Sulfatreat vessels shall operated and maintained to achieve 95% by weight removal of sulfur compounds from TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Fugitive VOC emissions from this casing vapor control system (CVCS) shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of the vapor processed through this operation shall not exceed 10% by weight. Permittee shall sample and record the VOC content of the vapor at least once every 12 months. The sample shall be taken on the main vapor line after all individual vapor streams are combined and prior to the sulfur scrubbers. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
10. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401; the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rules 2201 and 4401, 5.5.1 and 5.5.2] Federally Enforceable Through Title V Permit
11. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
12. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
13. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
14. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
15. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
16. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
17. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

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18. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
19. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
20. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.6] Federally Enforceable Through Title V Permit
21. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. Notwithstanding the above, wells that are not operating are exempt from these requirements while undergoing service or repair. [District Rule 4401, 4.0, 5.2.2] Federally Enforceable Through Title V Permit
22. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. Notwithstanding the above, wells that are not operating are exempt from these requirements while undergoing service or repair. [District Rule 4401, 4.0, 5.2.2] Federally Enforceable Through Title V Permit
23. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
24. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
25. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
26. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
27. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
28. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit

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29. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
30. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
31. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
32. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
33. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
34. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
35. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
36. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
37. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
38. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
39. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
40. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
42. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit


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43. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
44. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
45. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
46. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
47. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
48. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
49. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
50. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

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51. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
52. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit

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